

Executive Compensation Analysis

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Part 1

CEO Compensation

Execucomp Data Overview

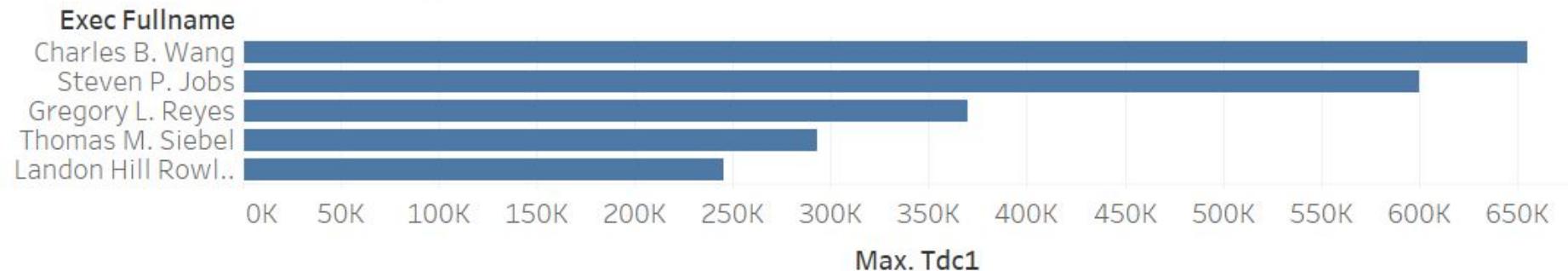
- Observations are presented in both the firm level and industry level
 - Firm level - indicate by company name
 - Industry level - indicate by SIC code

Company (Top 10 Examples)	Number of Observations	Industry (Top 10 Examples)	Number of Observations
3M CO	25	COMMERCIAL BANKS	2104
ABBOTT LABORATORIES	25	REAL ESTATE INVESTMENT TRUST	1245
ADVANCED MICRO DEVICES	25	PREPACKAGED SOFTWARE	1223
AETNA INC	25	SEMICONDUCTOR,RELATED DEVICE	1167
AFLAC INC	25	PHARMACEUTICAL PREPARATIONS	1026
ALTRIA GROUP INC	25	CRUDE PETROLEUM & NATURAL GS	965
AMEREN CORP	25	CMP PROGRAMMING,DATA PROCESS	897
AMERICAN AIRLINES GROUP INC	25	FIRE, MARINE, CASUALTY INS	817
AMERICAN ELECTRIC POWER CO	25	EATING PLACES	740
AMERICAN EXPRESS CO	25	ELECTRIC SERVICES	739

Top 5 Highest Total Compensated CEO

- Highest: Charles B. Wang (\$655,447.998)

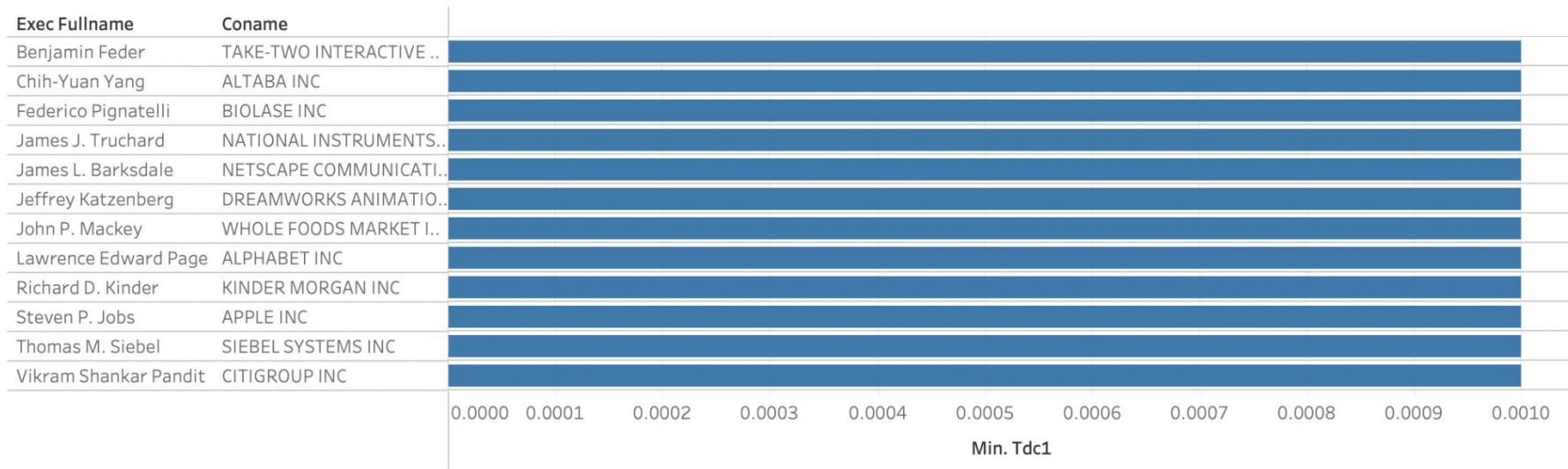
Top 5 CEO Total Compensation



Lowest Total Compensated CEO

- 12 CEO from 12 different companies had compensated with \$0.001

CEOs with lowest compensation



Trend In Compensation Overtime

Trend In Compensation Over Time Per Year

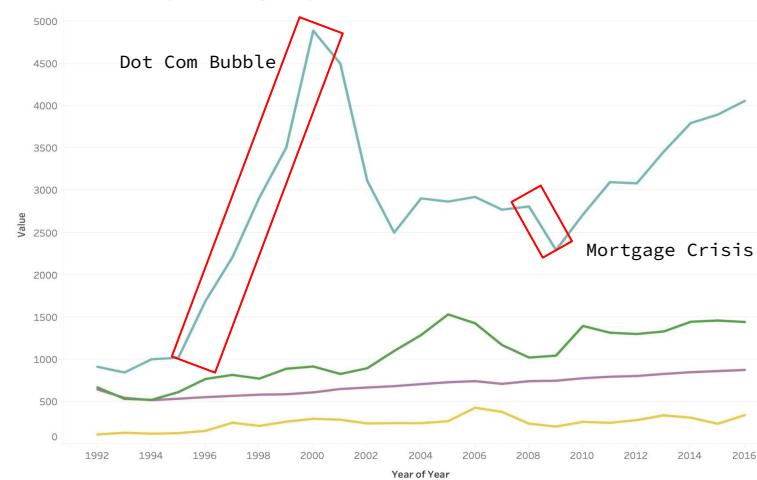


- **Differents:**
 - Average is more likely to reflect/affected by positive and negative changes (more fluctuation)
 - Median is relatively more steady
- A high peak/ upward trend shown in average TDC1 may due to Dot Com Bubble, which lead to high performance on technology and online heavy companies

Trend In The Components of Total Comp.

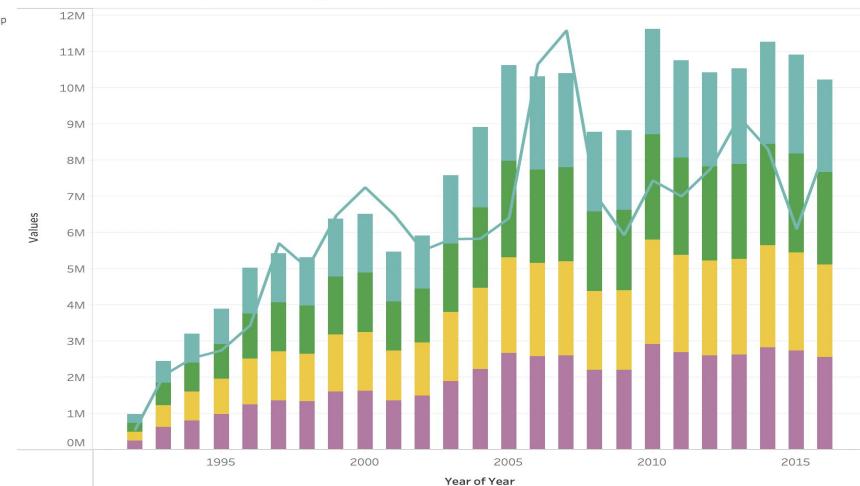
- Highest fluctuation in average equity comp as it reflect the movement in stock market
- Relatively steady increase in average salary and other comp
- Average incentive comp has some degree of fluctuation especially during 2001 to 2008 with a peak in 2005

Trends in Total Compensation by Components



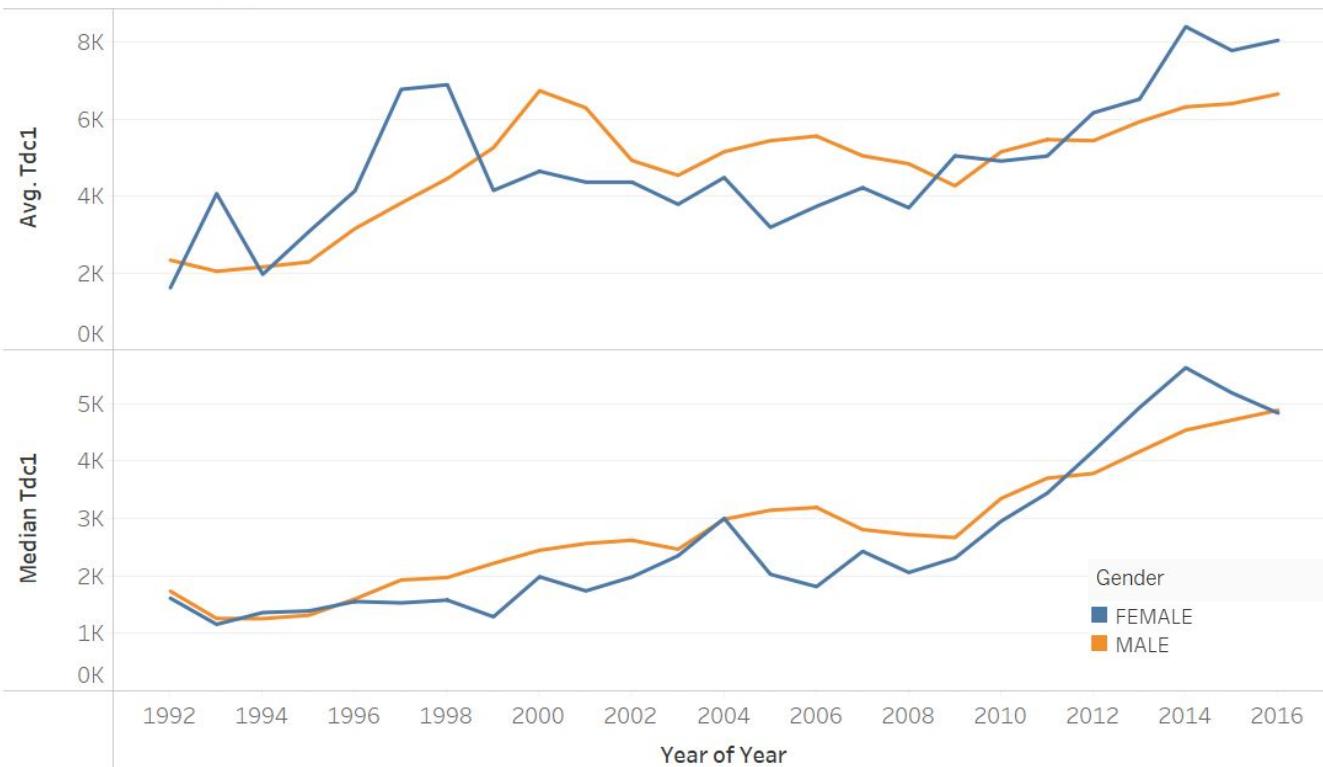
The trends of Avg. Equitycomp, Avg. Incentivecomp, Avg. Othercomp and Avg. Salary for Year Year. Color shows details about Avg. Equitycomp, Avg. Incentivecomp, Avg. Othercomp and Avg. Salary.

Trends in Total Compensation by Components



Trend In Compensation (Male vs. Female)

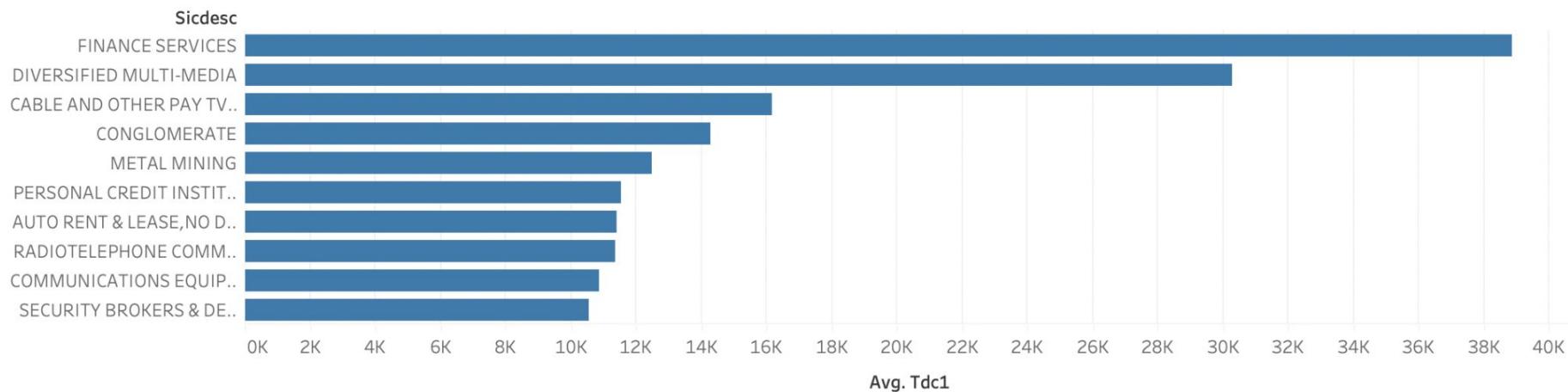
Trend In Compensation For Male vs. Female Executives



- The average and median of compensation is quite similar for both male and female
- Female's average and median compensation have been growing faster since 2008 and have exceeded male's average and median compensation since 2012

Top Industry With Highest CEO Comp.

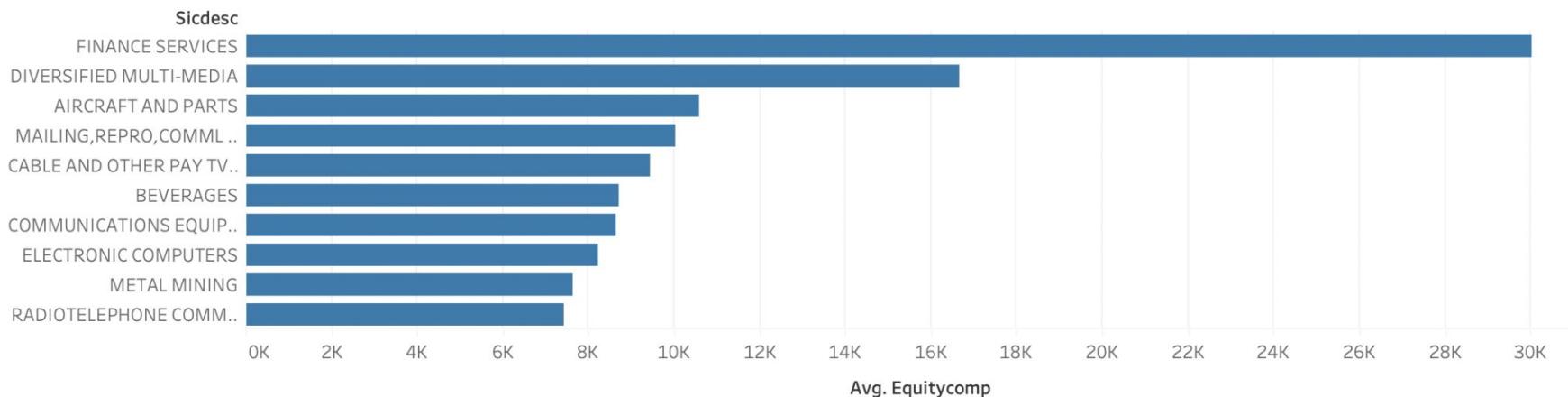
Industry Top 10 average CEO compensation



- The financial service industry has the highest average CEO compensation
- Approximately 39K

Top Industry With Highest Equity Comp.

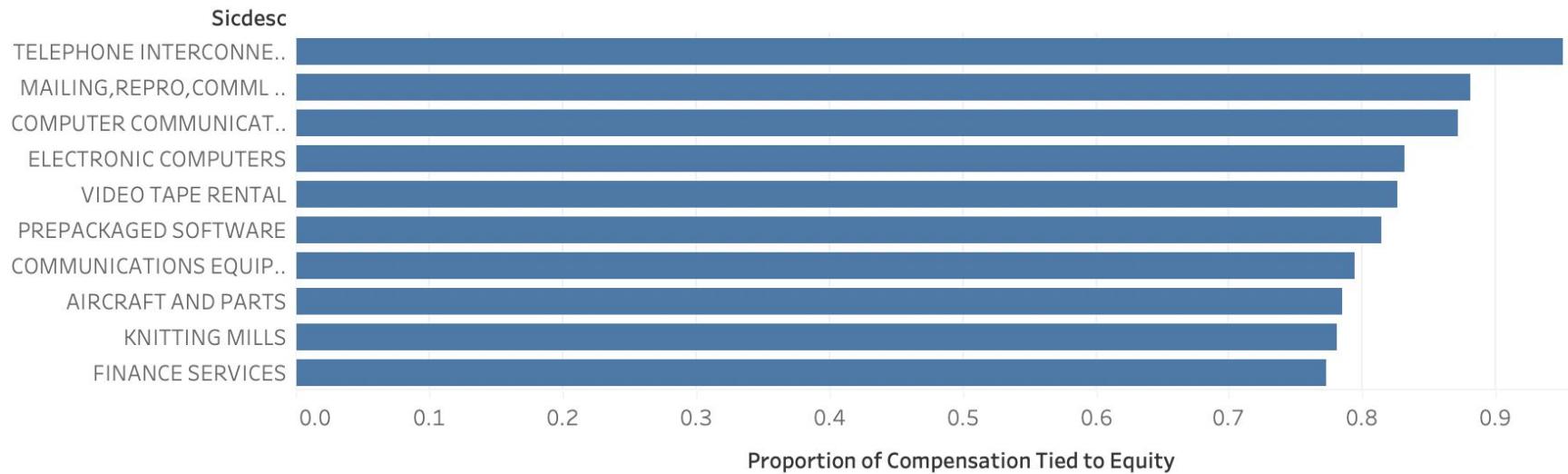
Industry Top 10 average equity compensation



- The financial service industry has the highest average equity compensation
- Approximately 30K

Top Industry With CEOs Have Highest Proportion Of Comp. Tied To Equity

Industry Top 10 Proportion of Compensation Tied to Equity



- Telephone interconnect system industry do the CEOs have the highest proportion of their compensation tied to equity
- Approximately 95% of CEOs compensation tied to equity

Part 2

Financial Statement Data

Compustat Data Overview

- This dataset is shown is company level, without indicating which industry each company is in
- Some unique identifiers can be a combination of GVKEY/ TIC/ Company Name and FYear
- There is substantial amount of missing data in AT, CSHO, IB, and PRCC_F

Trend In Company Over Time

Market Value of Equity & Return on Assets Over Time Per Year

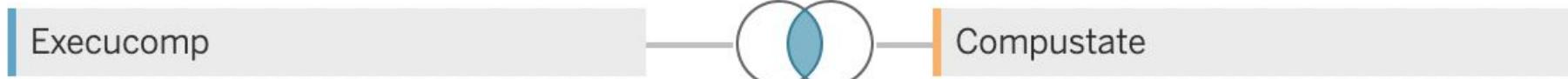


- The median ROA and MV of equity show some degree of correlation in movement
 - Upward and downward sloping at about the same time
- Reason: Stock market can impact ROA through changes in stock price, sale and revenue

Part 3

Merged Data

Inner Joining Datasets



Join two data set by match by ticker and year

Ticker	=	TIC
Year	=	Fyear

Inner Join

- Inner join helps retrieve the information **efficiently**.
- Avoid too many null values.

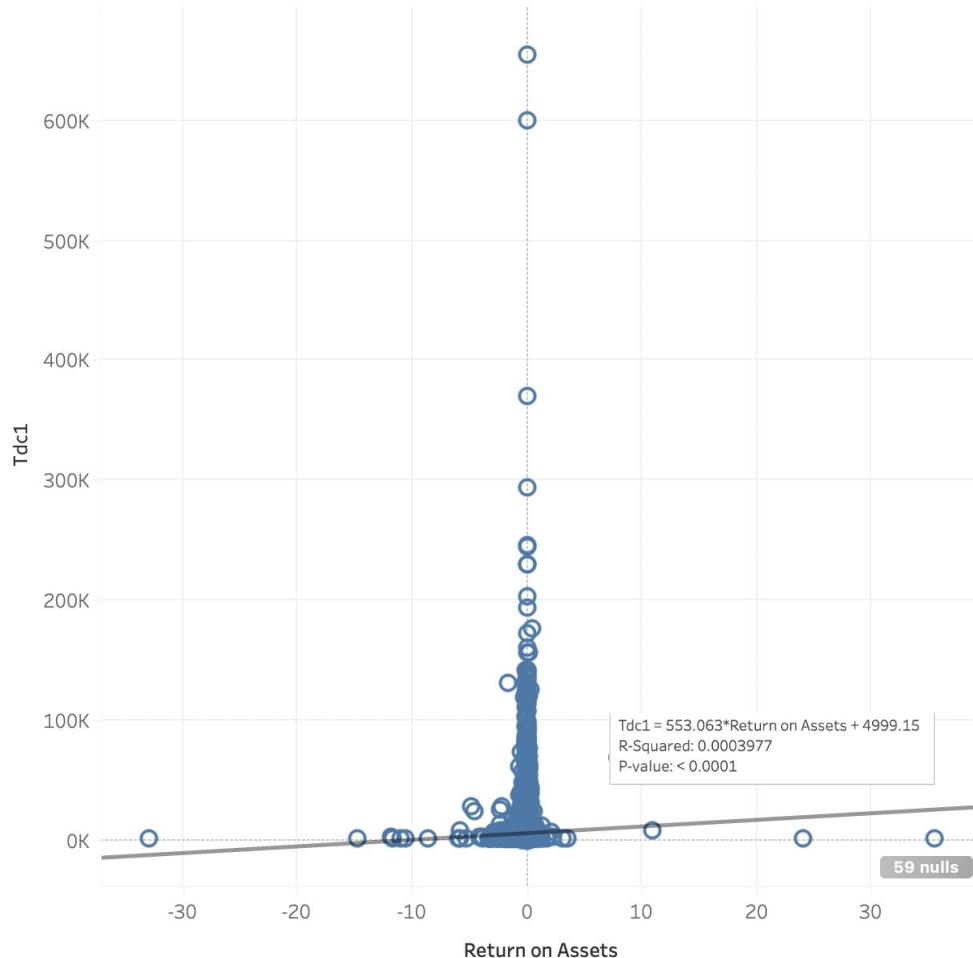
Relation Between Total Compensation and Return on Assets



Relation of TDC1 and MV Of Equity

- There is a weak linear relation between Tdc1 and the market value of equity since R-Squared is 0.09, though this rise is very slight relative to the variability in the data.
- There are few outliers located on the higher end of both axis.
- Most data below 200k Tdc1 and 400k market value of equity.

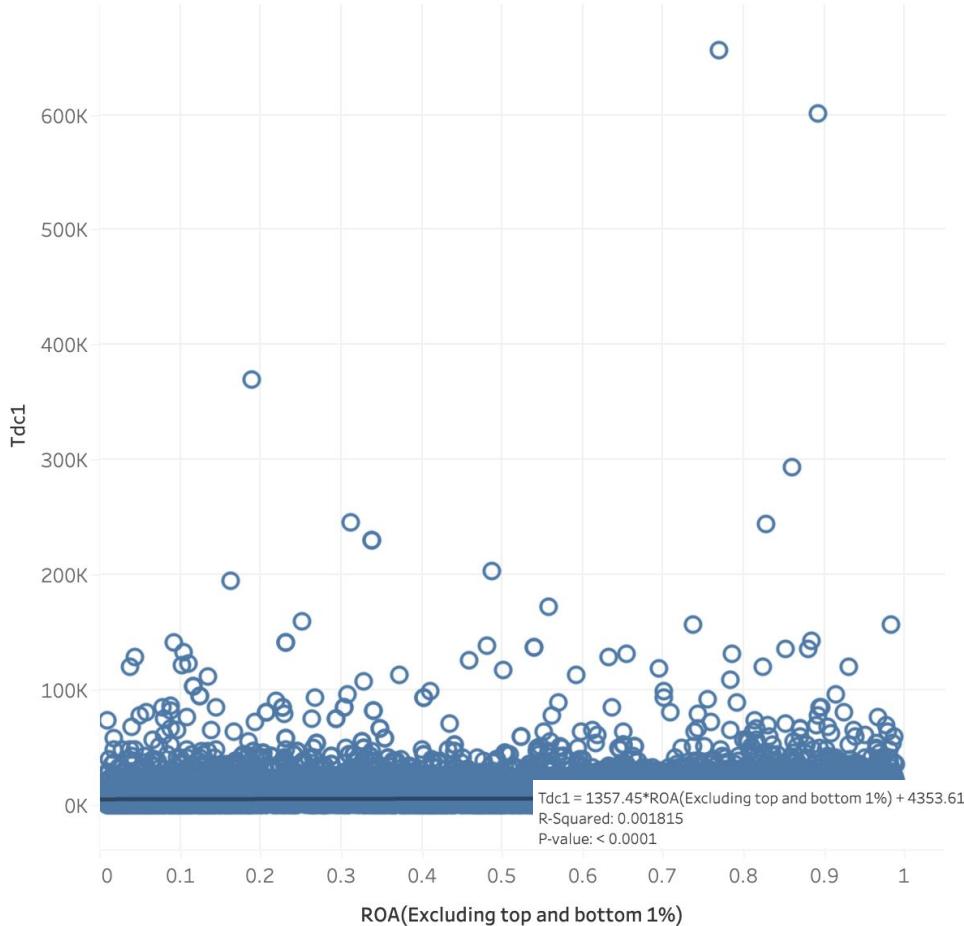
Relation Between Total Compensation and Return on Assets



Relation of TDC1 and ROA

- There is no clear relation between TDC1 and ROA since the R-Squared is extremely small: 0.0004.
- The majority of the values position around the y-axis where ROA is 0.
- There are two outliers located at the higher end of the y-axis with very high TDC1 and 0 value of ROA.

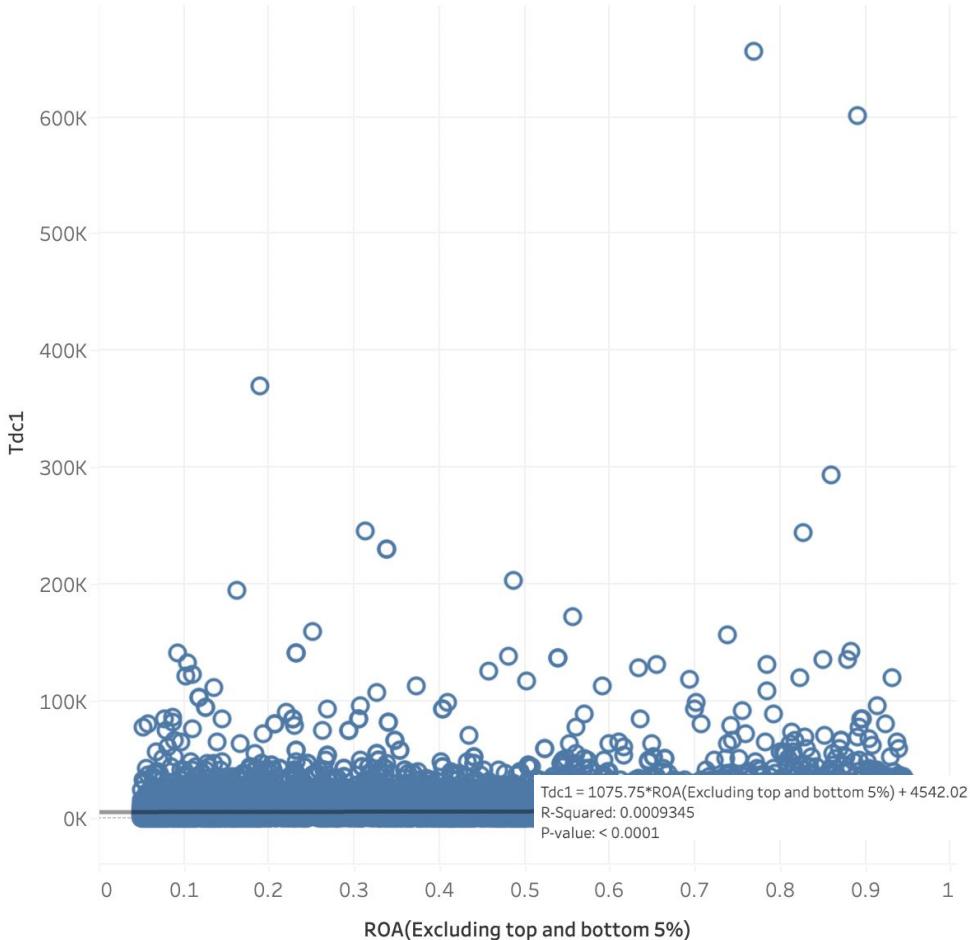
Relation Between Total Compensation and ROA
(Excluding top and bottom 1% of ROA)



Relation of TDC1 and ROA (Top & Bottom 1% Removed)

- There is no clear relation between TDC1 and ROA after deleting the top and bottom 1% of ROA since the R-Squared is extremely small: 0.0018.
- There are two outliers located with high TDC1 and ROA.

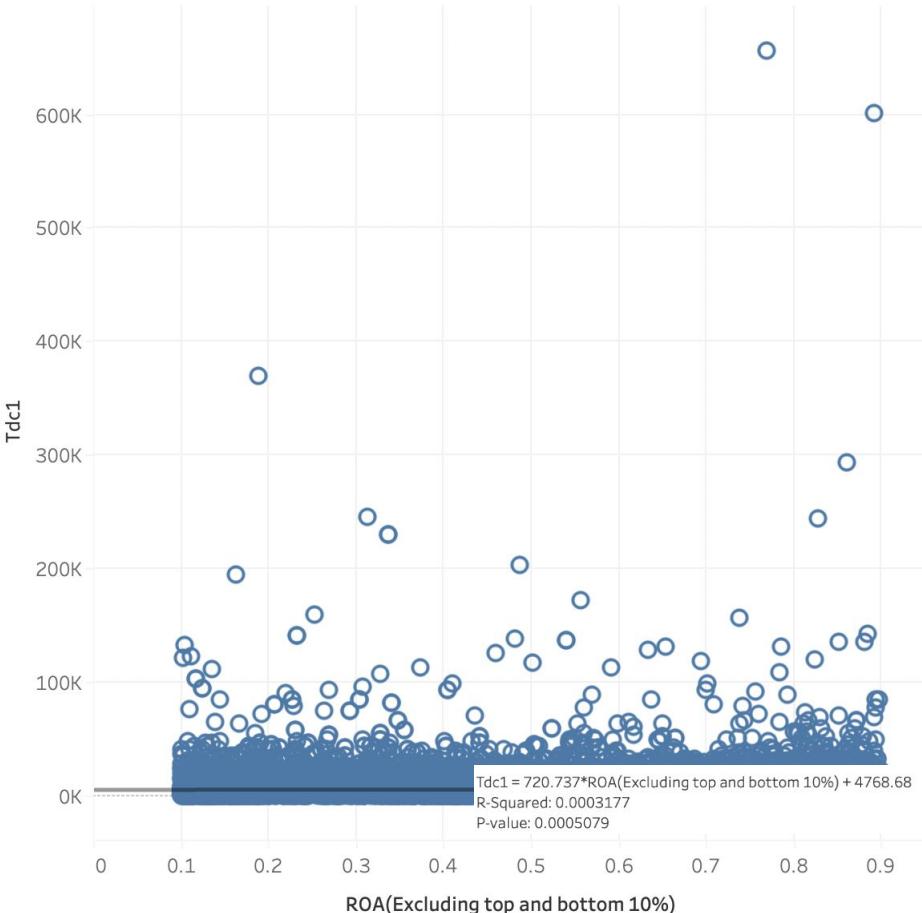
Relation Between Total Compensation and ROA
(Excluding top and bottom 5% of ROA)



Relation of TDC1 and ROA (Top & Bottom 5% Removed)

- There is no clear relation between TDC1 and ROA after deleting the top and bottom 5% of ROA since the R-Squared is extremely small: 0.00093.
- There are two outliers located with high TDC1 and ROA.

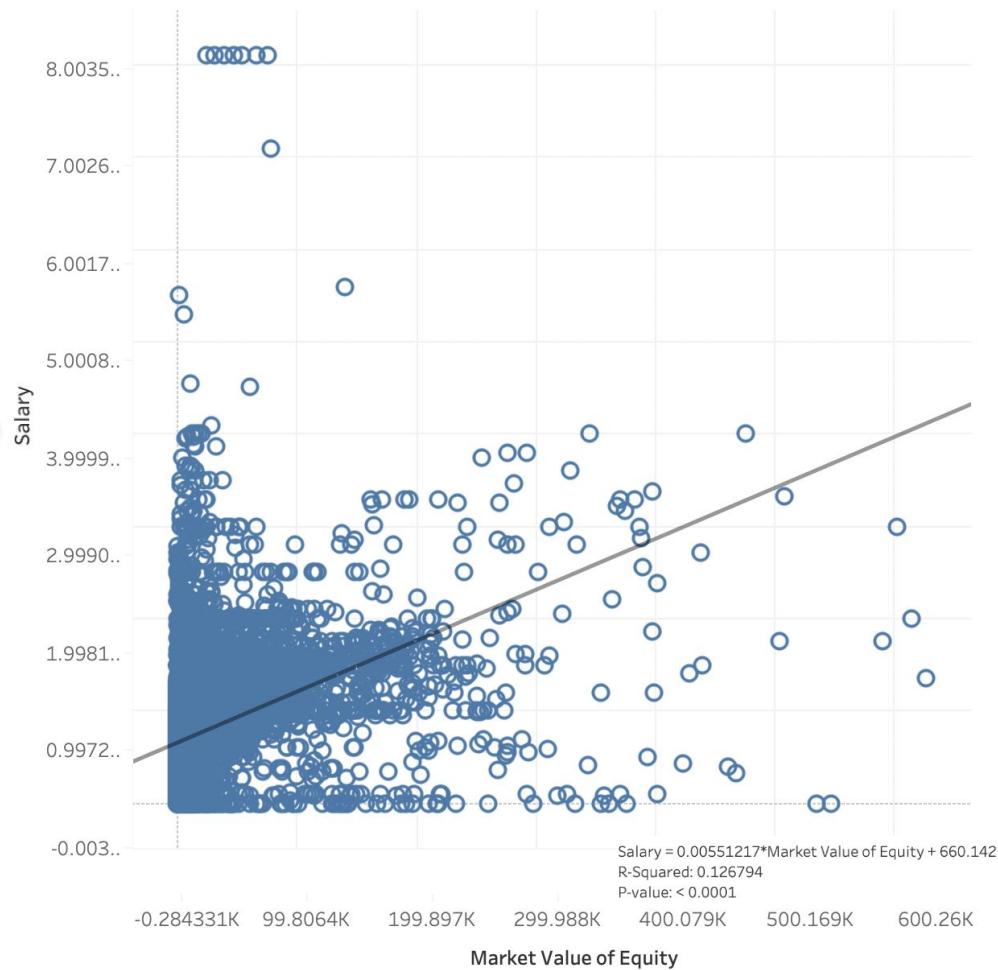
Relation Between Total Compensation and ROA
(Excluding top and bottom 10% of ROA)



Relation of TDC1 and ROA (Top & Bottom 10% Removed)

- There is no clear relation between TDC1 and ROA after deleting the top and bottom 10% of ROA since the R-Squared is extremely small: 0.00032.
- There are two outliers located with high TDC1 and ROA.

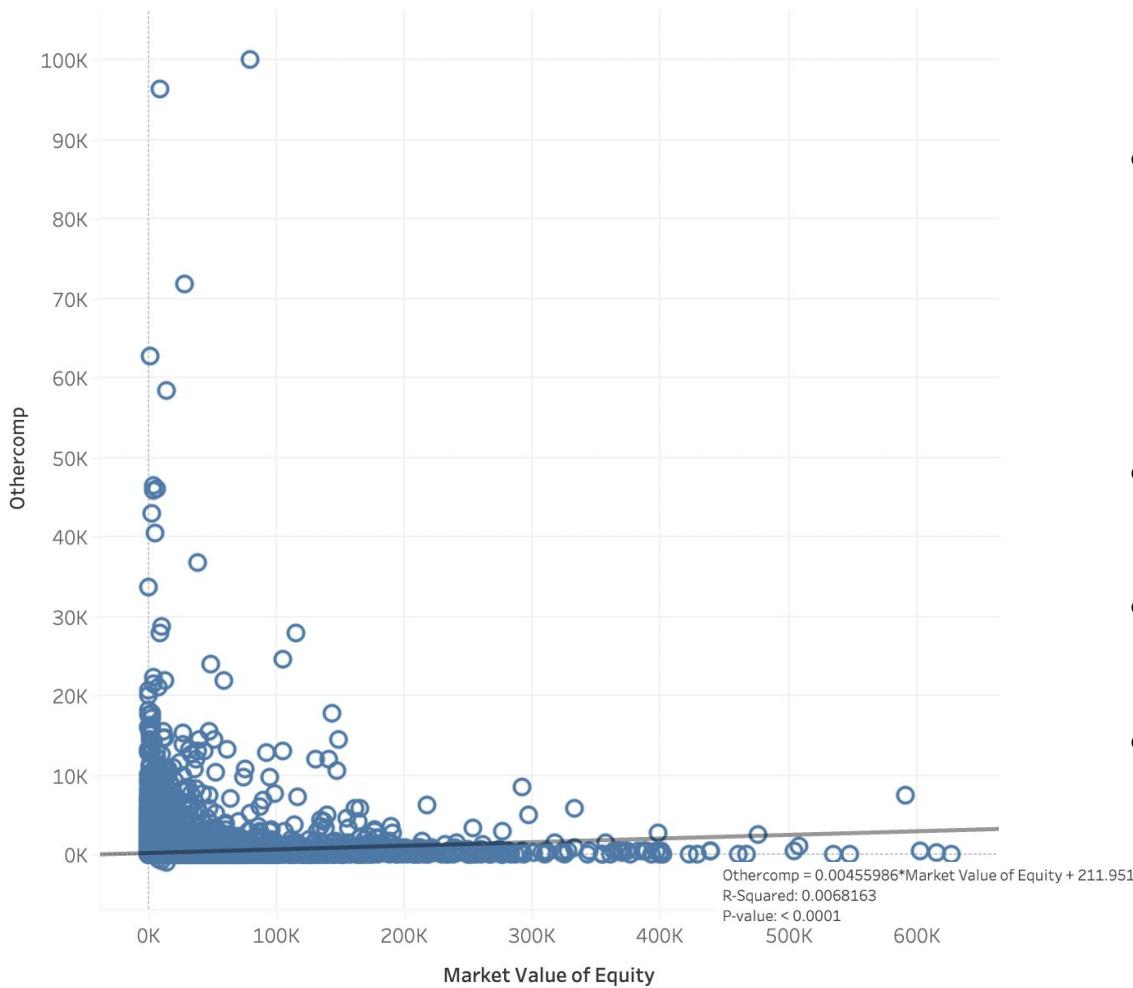
Relation between the salary and the market value of equity



Relation of Salary and MV of Equity

- The relation between the components of compensation salary and the market value of equity is positively associated.
- A linear relation indicates that the higher the firm market value, the higher the salary paid.
- There are few outliers with high salary but relatively low market value of equity.
- For each \$1,000, the salary goes up by $0.0055 * \$1000 = \5.5

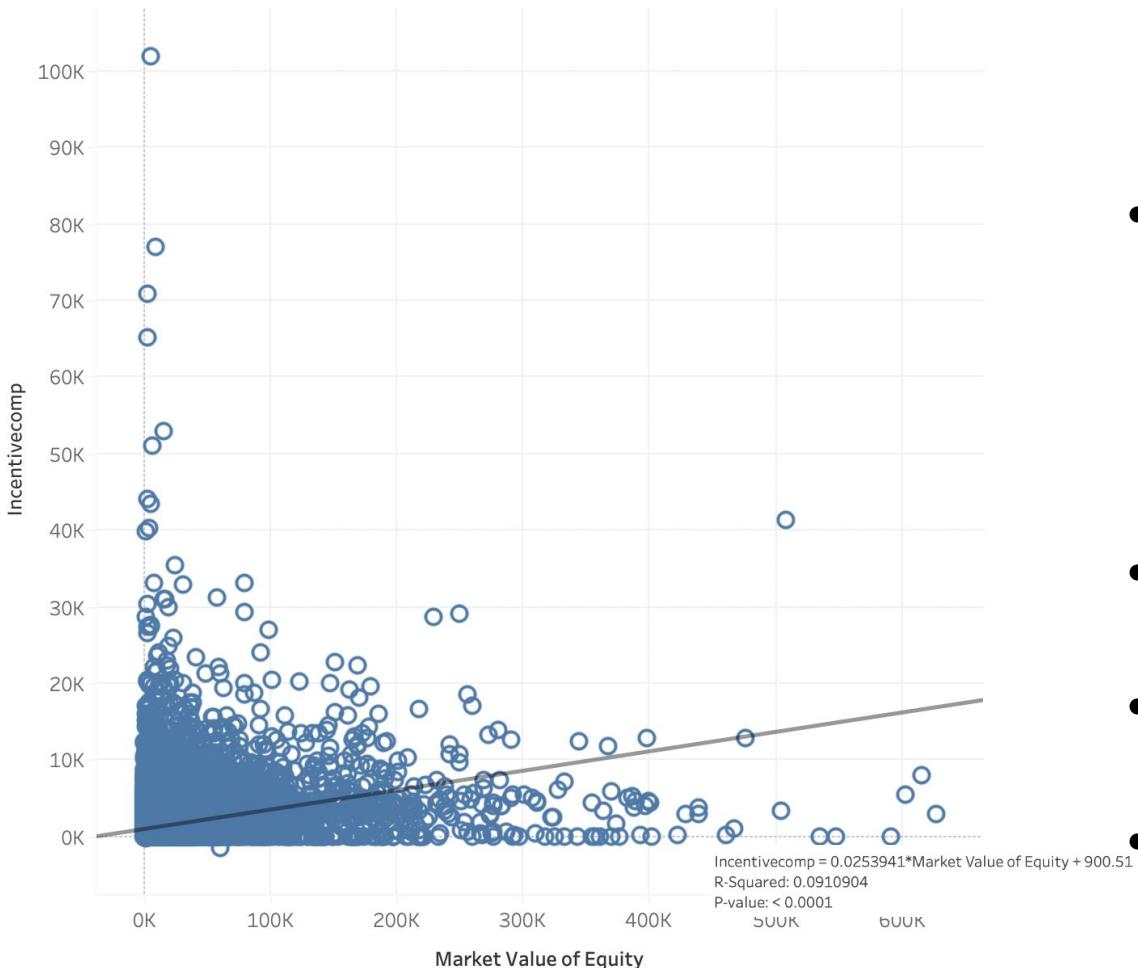
Relation between the other compensation and the market value of equity



Relation of Other Comp. and MV of Equity

- There is a very weak linear relation between othercomp and the market value of equity since R-Squared is 0.0046, though this rise is very slight relative to the variability in the data.
- There are few outliers located on the higher end of both axis.
- Most data below 20k othercomp and 400k market value of equity.
- For each \$1,000, the othercomp goes up by $0.0046 * \$1000 = \4.5

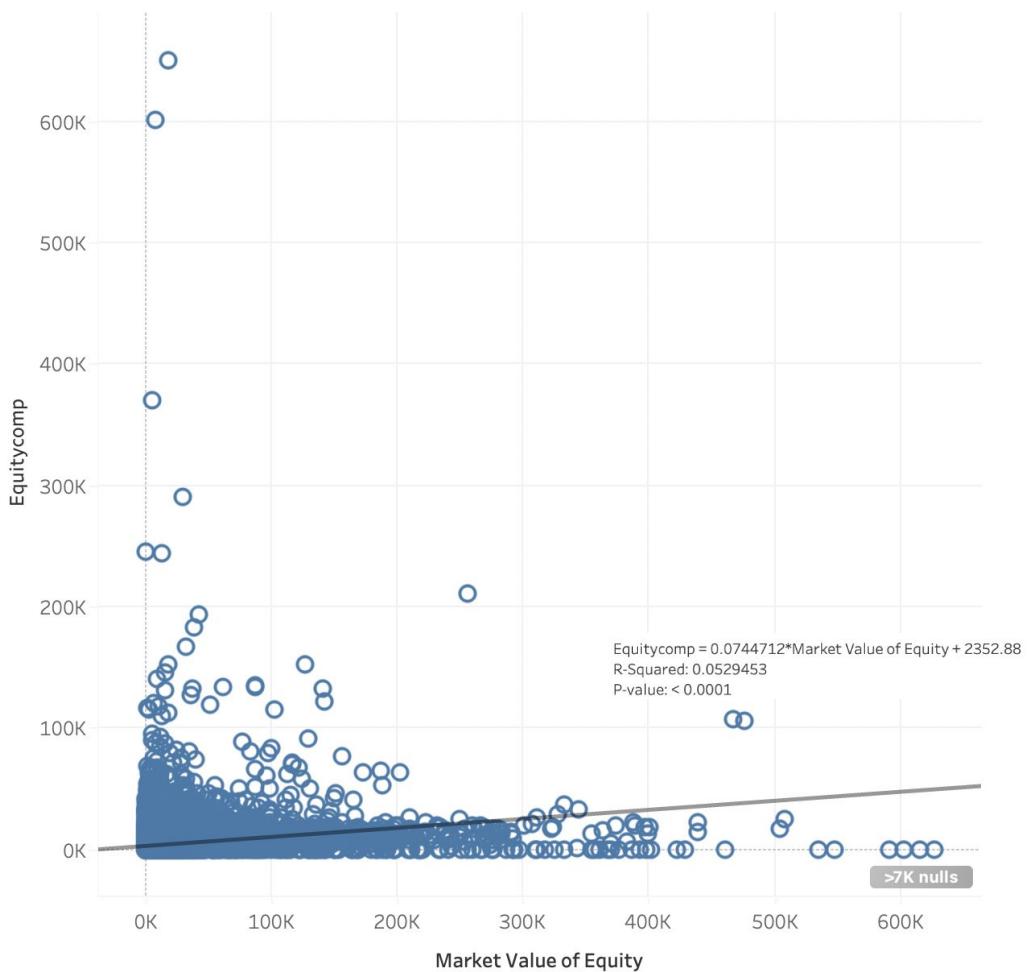
Relation between the incentive compensation and the market value of equity



Relation of Incentive Comp. and MV of Equity

- There is a weak linear relation between Incentivecomp and the market value of equity since R-Squared is 0.09, though this rise is very slight relative to the variability in the data.
- There are few outliers located on the higher end of both axis.
- Most data below 20k Incentivecomp and 400k market value of equity.
- For each \$1,000, the Incentivecomp goes up by $0.025 * \$1000 = \25

Relation between the equity compensation and the market value of equity



Relation of Equity Comp. and MV of Equity

- There is a weak linear relation between Equitycomp and the market value of equity since R-Squared is 0.05, though this rise is very slight relative to the variability in the data.
- There are few outliers located on the higher end of both axis.
- Most data below 200k Equitycomp and 400k market value of equity.
- For each \$1,000, the Equitycomp goes up by $0.074 * \$1000 = \74